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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,340	08/08/2001	Aki Tomita	NITT.0024	2756

38327 7590 05/12/2005

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EXAMINER

SHAH, KAMINI S

ART UNIT	PAPER NUMBER
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2142

DATE MAILED: 05/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/923,340

Applicant(s)

TOMITA ET AL.

Examiner

Kamini S. Shah

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 02/17/05 have been fully considered but they are not persuasive. Applicant in the response argues that Tanaka does not use the phrase "logical volume" as defined in claims 1, 5, and 8. However, examiner disagrees since the logical volumes are defined as groups of information located on physical volumes, and that Tanaka discloses physical "data storage units" [0033], line 3 A-D in figure 2, and further defines temporary storage areas 102 and the ordinary storage areas 104 of a plurality recording device groups A-D of the physical storage areas. Additionally, applicant argues that Tanaka does not allocate a PLURALITY OF DISK areas in the disk apparatus as disk pool corresponding to A PLURALITY OF logical volumes. Examiner disagrees for the following reasons a) there is no antecedent and basis for A PLURALITY of DISK areas having A PLURALITY of steady areas, and A PLURALITY of temporary areas in claim 1 and 5.

Claim Rejections - 35 USC § 112

2. Claims 1 and 5 recites the limitation "said plurality of steady areas" and "said plurality of temporary areas" in lines 9 and 12. There is insufficient antecedent basis for this limitation in the claim.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application

by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-8 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Tanaka 2002/0034379.

Regarding to claimed invention (claims 1,5 and 8), Tanaka teaches information storage system comprising a plurality of data storage unit groups internally, distributing and allocating a temporary storage area, on which continuous recording is always performed on each data storage unit; and controlling the recording so that information is sequentially recorded on the temporary storage area in each of the data storage unit groups; and keeping the data storage unit group other than that currently being selected as a recording object in a stopped state. The stopped stage is refers to a state in which the storage unit is not able to read from or record information to the storage unit, see col. 2, paragraph [0024]. Regarding to claimed steady area for steadily allocating a disk area, Tanaka teaches a step of dividing and allocating a temporary storage area used for a ring buffer to the plurality of data storage units, a step of selecting a data storage unit used as an information recording object to recorded on the temporary storage area allocated to the plurality of data storage units. Regarding to claimed temporary are

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corresponding to a task of allocating no disk area until allocation of disk area is requested, Tanaka teaches a step of controlling the data storage units so that the data storage unit other than the selected data storage unit is kept in a stopped state, the stopped state is a state in which the spindle of the storage device is in a non-spinning condition, see paragraph [0026].

Regarding to claims 2, 6, for determining an order of allocating based on priority of temporary area, Tanaka outlines a operational flowchart as shown in figure 4, such as when receiving command for starting retrieving, the controller 5 judges whether or not there is information on the currently operated data storage unit group A, and so forth.

Regarding to claims 3 and 7, Tanaka describe the series of operations with the starting-up time of the next data storage unit group B is judged with sufficient lead time, in paragraph [0042]. Also in paragraph [0037] includes reliability of operation is increased by leveling actual operation time of data storage units groups 1.

Regarding claim 4, Tanaka discloses the freeing disk pool as to the ordinary recording operation other than the ring buffer function in paragraph [0038].

5. Claims 8-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Hubis et al US 6,343,324.

Regarding claimed invention, Hubis teaching logical volumes 108 in the storage array associated with volume data structure 140 which is a volume WWN (VNT) table 130, see col. 8, lines 6-27. Hubis further teaches storage areas including first and second storage areas in the HVM structure applied to any situation where controlling access to one device by another device is desired, see col.7, lines 22-58. Furthermore, Hubis

teaches "data transaction" which, refers to information transfers between a host and the array control 106 and includes operation such as writing data to the array and read out command, see col. 7, lines 59-col. 8, lines 1-27.

Regarding claim 10, Hubis includes storage subsystem 108 having access control, and a specific set of host computer 101 as identified by a unique identifier for example, World Wide Name (WWN), see col. 4, lines 40-63.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kamini S. Shah whose telephone number is 571-272-2279. The examiner can normally be reached on IFP.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 571-272-3880. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kamini S Shah
Primary Examiner
Art Unit 2142

KSS